

CLAIMS

What is claimed is:

1. A system, comprising:
5 a gearbox, comprising:
a gearbox input shaft;
a gearbox output shaft, the gearbox output shaft being oriented transverse
to the gearbox input shaft; and
a motor mounting portion to enable a motor having a motor output shaft to
10 be secured to the gearbox, wherein the motor output shaft is aligned with the gearbox
input shaft when the motor is secured to the motor mounting portion.
2. The system as recited in claim 1, comprising the motor.
- 15 3. The system as recited in claim 2, wherein the motor comprises a mounting
adapter for securing the motor to the motor mounting portion.
4. The system as recited in claim 2, wherein the gearbox comprises a first bevel
gear secured to the gearbox input shaft.
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5. The system as recited in claim 4, wherein the gearbox comprises a second
bevel gear drivingly engaged by the first bevel gear, the first bevel gear being disposed
transverse to the second bevel gear.
- 25 6. The system as recited in claim 5, wherein the first and second bevel gears
are spiral bevel gears.

7. The system as recited in claim 5, wherein the second bevel gear is drivingly coupled to the gearbox output shaft.

8. The system as recited in claim 7, wherein the gearbox is adapted to rotate the gearbox output shaft at a lower speed than the gearbox input shaft.

9. The system as recited in claim 5, wherein the second bevel gear has a larger diameter than the first bevel gear.

10. The system as recited in claim 1, wherein the gearbox is shaft supported.

11. The system as recited in claim 1, comprising a coupling member for coupling the motor output shaft to the gearbox input shaft, wherein the coupling member is disposed in-line with the motor output shaft and the gearbox input shaft.

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12. A system, comprising:

a motor having a motor output shaft; and

a gearbox, comprising:

a gearbox input shaft coupled to the motor output shaft, and

20 a first bevel gear mounted on the gearbox input shaft, wherein the first bevel gear is oriented in-line with the motor output shaft; and

a second bevel gear operable to be rotated by the first bevel gear.

13. The system as recited in claim 12, wherein the first and second bevel gears are spiral bevel gears.

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14. The system as recited in claim 12, wherein the second bevel gear is larger in diameter than the first bevel gear.

15. The system as recited in claim 12, wherein the motor output shaft is oriented in-line with the gearbox input shaft.

5 16. The system as recited in claim 15, wherein the gearbox comprises a motor mounting portion and the motor comprises a mounting adapter securable to the motor mounting portion.

10 17. The system as recited in claim 12, wherein the gearbox comprises a hollow gearbox output shaft.

18. The system as recited in claim 17, wherein the second bevel gear is drivingly coupled to the hollow gearbox output shaft by at least one gear operable to reduce the speed of the gearbox output shaft relative to the gearbox input shaft.

15 19. A speed reducer, comprising:
an input shaft;
an output shaft oriented transverse to the input shaft;
a first bevel gear secured to the input shaft; and
a second bevel gear coupled to the output shaft and rotatable by the first bevel gear.

20 20. The speed reducer as recited in claim 19, wherein the first and second bevel gears are spiral bevel gears.

21. The speed reducer as recited in claim 19, wherein the output shaft is hollow
25 to receive a rotatable shaft therethrough

22. The speed reducer as recited in claim 21, wherein the speed reducer is adapted to be supported by the rotatable shaft.

23. The speed reducer as recited in claim 22, comprising at least one tie-rod securable to a fixed member to prevent the speed reducer from rotating about the rotatable shaft.

5 24. The speed reducer as recited in claim 19, comprising an output gear, wherein the output shaft is secured to the output gear.

25. The system as recited in claim 24, wherein the second bevel gear is drivingly coupled to the output gear.

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26. The speed reducer as recited in claim 19, comprising a first housing cover and a second housing cover, wherein the first housing cover is secured to the second housing cover to form a housing cover for the speed reducer.

15 27. The speed reducer as recited in claim 26, wherein the first housing cover comprises a mounting bracket extending transverse to the first housing cover, wherein the mounting bracket is operable to secure a motor to the first housing cover.

28. The speed reducer as recited in claim 27, wherein the mounting bracket is
20 operable to align a motor output shaft to the gearbox input shaft.

29. A system, comprising:
a shaft-supportable gearbox having a gearbox output, wherein the gearbox is adapted to secure a motor to the gearbox at a right angle to the gearbox output; and
25 a torque arm to prevent rotation of the gearbox relative to a shaft.

30. The system as recited in claim 29, comprising a motor securable to the gearbox.

31. The system as recited in claim 29, wherein the gearbox has an input shaft coupleable to a motor output shaft.

32. The system as recited in claim 31, wherein the gearbox comprises a first
5 bevel gear secured to the input shaft and a second bevel gear rotatable by the first bevel gear.